NATURAL RESOURCES CONSERVATION SERVICE
UTAH CONSERVATION PRACTICE STANDARD

WASTE STORAGE FACILITY
(MANURE STAGING AREA)

(No.)

CODE 313A

DEFINITION

Established locations outside the manure production area that can be used to store solid manure during periods when manure cannot be land applied.

PURPOSES

Manure Staging Areas serve as a component of a Waste Management System (312) to:

- Store solid manure for a limited period of time, generally less than 90 days,
- To minimize agricultural nonpoint source pollution of surface and ground water resources.

CONDITION WHERE PRACTICE APPLIES

Manure Staging Areas are recommended where manure cannot be spread regularly, or where permanent structures are not feasible, or necessary.

CRITERIA

General Criteria Applicable to All Purposes

Staging areas should be designed and managed for the number of days when weather, climatic, or cropping conditions are not appropriate for spreading.

Manure Staging Areas shall be located:

- Where there is low risk of pollution to any downslope water conveyance system, waterbody, well, or other water source
- Outside of wetlands, watercourses, and 100 year flood plains
- Where clean water can be diverted from the area
- Outside of low depression areas
- On slopes from 1 to 3%
- Where access is practicable during poor weather conditions such as when the ground is snow covered, icy, or muddy,
- Where discharges will not occur during a 25-year, 24 hour storm
- Outside of a public drinking water source protection Zone 1 or 2 as defined in the Utah Administrative Code R309-600
- Where soils have slow to moderate permeability to minimize the potential for groundwater contamination
- Outside of areas where soils (within 3 feet of the soil surface) are sandy, gravelly, or where a high water table or bedrock exists

Staging areas can be at one or more locations and shall have sufficient area to store the calculated amount of manure during the storage period. An individual staging area shall generally not be larger than ¾ of an acre.

When sizing the staging area, assume the manure will not stack higher than 3½ feet unless manure consistency and moisture characteristics indicate otherwise.

Evaluate site needs for grading, shaping, lining, paving, and soil compaction in relation to proper equipment operation, site accessibility, and for potential ground water contamination from the leaching of nutrients and petroleum products.

Berms and/or diversions shall be placed, as needed, to contain runoff from a 25-year, 24-hour storm plus the average amount of precipitation expected during the storage period. All side slopes for any excavation or berm shall not be steeper than three horizontal to one vertical (3:1).

Diversions shall be placed, as needed, to divert clean water away from the staging area.

CONSIDERATIONS

- Consider the need for a minimum of 30 days of permanent storage in the feedlot area.
- Total volume of manure, pollution potential, and number of areas should be taken into consideration when evaluating the appropriateness of this practice.
- Consider locating staging areas as close as possible to the areas where the manure will be spread.
- Consider prevailing wind direction, nearby buildings, landforms, and surrounding vegetation in order to minimize odors and to create a more pleasing view.
- Costs of permanent storage structures should be evaluated against the cost of hauling to the staging areas.

PLANS AND SPECIFICATIONS

Plans and specifications shall be prepared in accordance with the criteria of this standard and shall describe the requirements for applying the practice to achieve its intended purpose.

The planned Waste Management System (312) will show the location of the Manure Staging Areas and access routes to the planned storage areas.

OPERATION AND MAINTENANCE

Manure shall be removed, as specified in the design, from the Manure Staging Area in accordance with Nutrient Management (590) and Waste Utilization (633) practice standards.

The staging area will be regraded after emptying, as needed, to prevent ponding in the staging area and any runoff from the area.

Manure should be stacked away from the downslope berm to avoid having manure located where runoff from the staging area may collect and pond.